

2 8 0001

REMEDIAL APPROACH PLAN  
SOUTH CAROLINA RECYCLING & DISPOSAL

BLUFF ROAD SITE

TDD No. F4-8102-04

February 6, 1981

In memoranda issued in December 1980 and January 1981 to the Environmental Protection Agency (EPA) Regional Administrators, Michael Cook, Acting Deputy Assistant Administrator for the Hazardous Emergency Response Division, requested basic information about each Region's top-priority hazardous waste sites so that funds for remedial design work could be allocated. The requested information included a summary of the present status of each site and costs and schedules for projected remedial work. A format to provide such information, referred to as a Remedial Approach Plan (RAP), was developed by EPA Region IV and Ecology and Environment, Inc. (E&E). This letter serves as the RAP for the South Carolina Recycling and Disposal, Inc. (SCRDI) site located on Bluff Road near Columbia, South Carolina.

REMEDIAL RESPONSE MANAGEMENT PLAN

A strategy for the management of a hazardous waste site from its initial identification through final remedial action and site close-out has recently been developed by EPA. This management plan, analogous to the flow chart presented in Attachment 1, identifies the major tasks and decision points within a remedial response program. The management plan further identifies the basic elements that comprise each flow chart step. These elements address not only the technical aspects of each step, but also define possible legal and public information needs as well. Specific public interest considerations are addressed in Attachment 2, Community Relations Guidance.



10925774

The remainder of this report discusses the steps of the management plan that have been accomplished to date. It further identifies the tasks that remain to be completed, and presents a schedule and estimated costs associated with their completion.

#### SITE DESCRIPTION

The SCRDI chemical waste recycling and storage area, commonly known as the "Bluff Road" site, is a two acre, partially fenced lot located about seven miles southeast of Columbia and adjacent to the Westinghouse Nuclear Fuel Plant. The site presently contains between 3,000 and 10,000 tightly stacked 55 gallon drums and numerous smaller jars and cans containing a variety of chemical wastes. Many of the drums are in poor condition, and the numerous ground stains and puddles at the site suggest that many of these are leaking or have leaked. According to inventories compiled by SCRDI, the chemical wastes stored at Bluff Road comprise a list of highly toxic, flammable and/or reactive substances. A number of such drummed wastes are stacked two-high within 10 meters of heavily-traveled State Highway 48.

The hydrogeology of the site is defined by moderately porous soils, a shallow groundwater table and few surface drainage features. It can be assumed that most precipitation in the region percolates to the groundwater with minimal surface travel.

#### EFFORTS TO DATE

Regulatory agency attention to the potentially hazardous conditions at the Bluff Road site was drawn by an incident in October 1977 when rainwater seeped into, and reacted with, the contents of one 55 gallon drum. The result of this reaction was the formation of a dense, corrosive vapor cloud that caused about 50 persons, including State inspectors and motorists stopping on State Highway 48, to seek medical attention.

Subsequently, the South Carolina Department of Health and Environmental Control (SCDHEC) requested that SCRDI compile an inventory of the materials stored at Bluff Road and at its two other storage sites near Columbia. In early 1980 SCDHEC required SCRDI to consolidate all of its chemical wastes at the Bluff Road site.

A July 1980 water quality field survey, conducted by the EPA Region IV Surveillance and Analysis Division (SAD), could not conclusively link the poor housekeeping practices at the Bluff Road site to small levels of contaminants found in nearby drainage ditches. However, the investigators did conclude that local surface waters and/or groundwaters were highly susceptible to contamination by runoff from the facility.

During Fall 1980 the SCDHEC conducted a study of the quality of shallow groundwater near the Bluff Road site. This study concluded, in an unpublished report, that groundwater has been contaminated by organic chemicals which most likely originated from the Bluff Road facility.

In February 1981 the Region IV FIT submitted an Emergency Action Plan (EAP) for the Bluff Road site. This document evaluates and recommends specific short-term hazard abatement measures and their estimated costs, and offers a general approach for a final remedial action design.

A summary of the litigative activities that have taken place to date with regard to the Bluff Road site were recently summarized by the EPA Region IV Enforcement Division, Hazardous Section as follows:

In July, 1979 the South Carolina Department of Health and Environmental Control (DHEC) filed suit seeking injunctive relief in an effort to remedy conditions at the Bluff Road site of South Carolina Recycling and Disposal, Inc. (SCRDI). The court refused to grant preliminary relief. As the EPA developed its case, DHEC was cooperative but actively involved in addressing other sites operated by SCRDI. At one point (June, 1980) it was attempting to convince the legislature to pass a mini-superfund and asked EPA for a rough estimate of the cost of cleaning up Bluff Road. DHEC resurrected its original suit against SCRDI around the same time that EPA filed suit (July, 1980). DHEC is willing to seek the necessary appropriations from the legislature to meet its financial obligation if Superfund is used to clean up the site.

## PROJECTED REMEDIAL APPROACH

The anticipated directions that will be taken in each step of the site management plan are presented below. It should be noted, however, that the strategies recommended in each step are based on currently available information about the site or premised on certain assumptions that might become invalid after the site is more completely characterized.

Field Investigations - Based on the groundwater monitoring data derived by SCDHEC, the most immediate threat to the environment is the contamination of the groundwater caused by wastes leaching through the porous soils. The State's finding of some groundwater contamination indicates that a more thorough study will be required to accurately locate and characterize the groundwater contaminant plume so that future remedial measures can be designed. This should be accomplished by the installation of a suitable number of hand-augered wells for groundwater sampling and analysis.

Studies in the field will also be required under subsequent steps of the remedial response strategy. These studies are anticipated to include an on-site sampling and analysis of the contents of each waste container to determine their suitabilities for batching with other wastes. Also, more detailed analyses of the consolidated wastes and of contaminated soils at the site will be required prior to their disposal.

Feasibility Studies - The above mentioned Bluff Road Site EAP outlines the most feasible approach for mitigating the site's hazard conditions. Also, the EAP presents an estimated cost to accomplish that portion of the remedial action that will temporarily stabilize the hazards. However, a more thorough cost analysis will be required for funding appropriations after a more detailed design of both the temporary abatement and ultimate remedial measures has been developed. The conditions requiring remedial action are not complex and thus lend themselves to a relatively clear-cut set of solutions. Also, it is anticipated that the most feasible remedial options will require little or

no environmental or public impact analyses as defined by NEPA. Therefore, it is assumed that the feasibility study phase of the remedial response plan will be brief.

Select Remedy - Given the hydrogeologic characteristics of the site, which include a high water table and porous soils, it is assumed that on-site burial will not be considered more feasible than off-site disposal. Further, given the high cost factors that are generally applied for developing on-site incineration cost estimates, the relative proximities of an off-site incinerator and a permitted hazardous waste landfill render this latter combination the most cost effective.

Assignment to National Priority List - The prioritization of the Bluff Road site relative to a standard set of criteria, with its subsequent placement on a site funding list will be accomplished in a nation-wide EPA effort. For the purpose of projecting a complete remedial response schedule in this report it is assumed that this effort will conclude that funding should be provided without delay.

Final Site Improvement Design - It is anticipated that the final site improvement design will consist of redrumming leaking wastes, drum segregation and sampling, batching of compatible wastes, and transportation of the wastes to the disposal site or sites. Also, a contaminated groundwater extraction and disposal system will be installed and operated. Each item listed is relatively easily designed and scheduled, and since no significant delays will be incurred by the need for permits to conduct these tasks, the design of the final site improvement strategy should be accomplished at a relatively low cost.

Site Improvements - Implementation of the final site improvement design will require post-cleanup maintenance of the groundwater extraction and disposal system. No other long-term maintenance requirements are foreseen.

## COST AND COMPLETION SCHEDULE

Cost estimates for the major steps of the remedial response plan are presented in Attachment 3. These costs reflect best estimates based on current available technology. Major costs are developed in Attachment 5. The total estimated cost to complete remedial actions at the Bluff Road site is \$2,130,000.

Attachment 4 represents an estimated schedule for the completion of all subsequent remedial response plan tasks through final closure of the Bluff Road site. The time spans assigned to each major task are rough estimates that assume that no lengthy delays in any step will be caused by litigation actions or national site funding appropriations.

To respond to Michael Cooks' questionnaire dated 15 December 1980, Attachment 6 provides responses to each of its 14 questions.

The designated Remedial Approach Plan Coordinator for this site is Ron Joyner (FTS) 257-2234. At an appropriate future time an On-Scene Coordinator (OSC) within the context of the National Contingency Plan will be identified by Al Smith, Chief, Hazardous Emergency Response Branch (FTS) 257-3931.

*Samuel A. Mason, AFITL*  
for Gary M. Ellis  
Project Officer

*James L. Templeton, Jr.*  
James L. Templeton, Jr.  
Field Investigation Leader

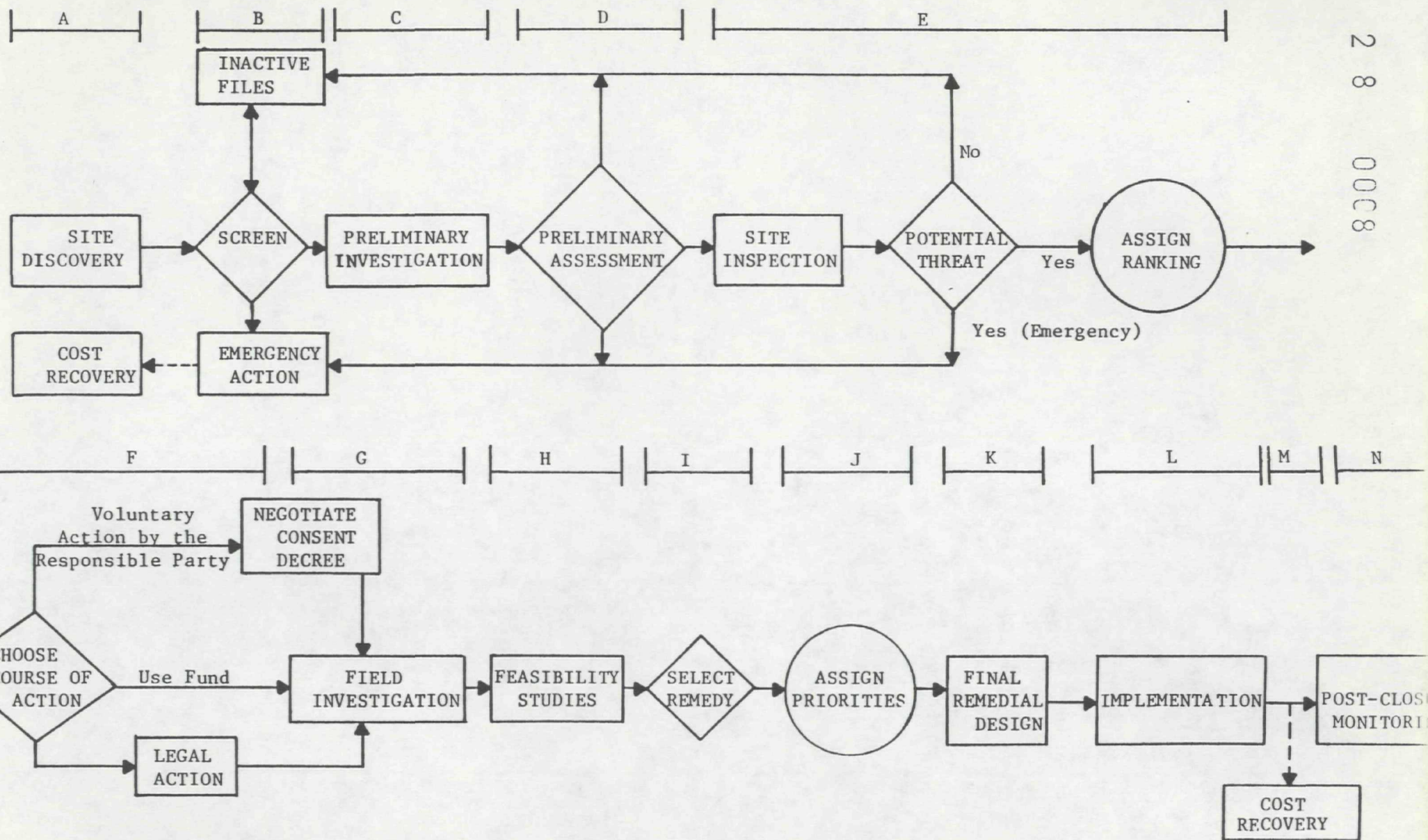
2 8 0007

- (1) Remedial Approach Flow Chart
- (2) Community Relations Guidance
- (3) Estimated Costs
- (4) Projected Completion Schedule
- (5) Standard Cost Estimating Criteria
- (6) Answers to Questionnaire

GME/JLT/lsr

ATTACHMENT #1  
REMEDIAL APPROACH FLOW CHART

280008



Oct. 28, 1980

ATTACHMENT 2  
BLUFF ROAD  
SOUTH CAROLINA RECYCLING & DISPOSAL  
COLUMBIA, S.C.  
COMMUNITY RELATIONS GUIDANCE

This facility, which is about 7 miles southeast of Columbia, S.C. on Route 48, has operated for about 5 years. There are about 3,000 to 10,000 drums on the site which is directly across the highway from the Westinghouse Nuclear Fuels plant. The site is not adequately fenced or otherwise secured, and has drums of unknown toxic wastes stacked within 30 feet of the highway. Several accidents have occurred on the site. The terrain is characterized as a sandy, damp, and sometimes marshy. Safety for highway traffic and workers at the nearby Westinghouse plant is a major consideration. This site has the advantage of being located near an approved landfill and incinerator. On-site disposal is not a consideration at this time. Public interest is likely to be high because of proximity to large and sensitive populations. However, given a good contingency plan for evacuation and traffic rerouting, and cooperation from adjoining land owners, the chances seem good that the site can be secured and the contaminants redrummed and removed. The work will be mainly concerned with securing the site and the repackaging and removal of the contaminants; therefore the primary public concern would seem to be adequacy of safety precautions. The public participation activities proposed and their timing and estimated costs are presented on the attached flow chart and table.

Briefing (2)  
Community Info  
Interview  
Fact Sheet  
Press Release

Briefing  
Public Cons(3)  
Public Meeting

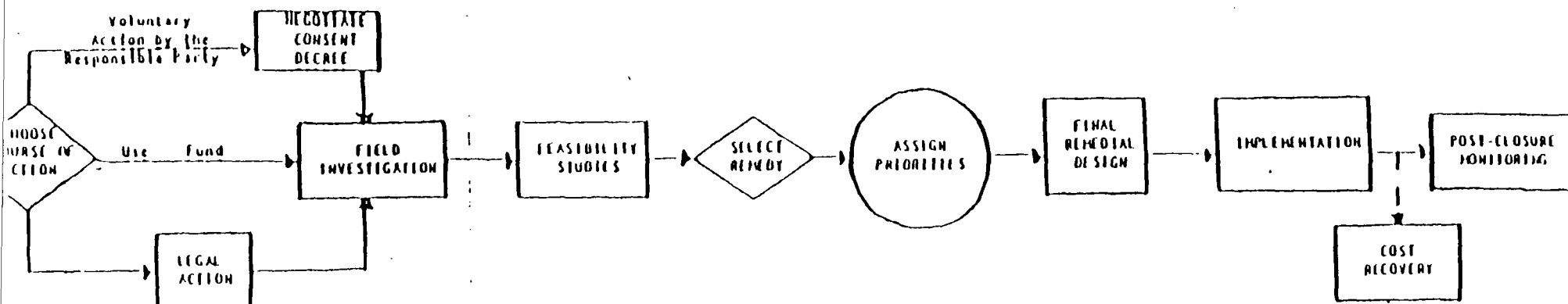
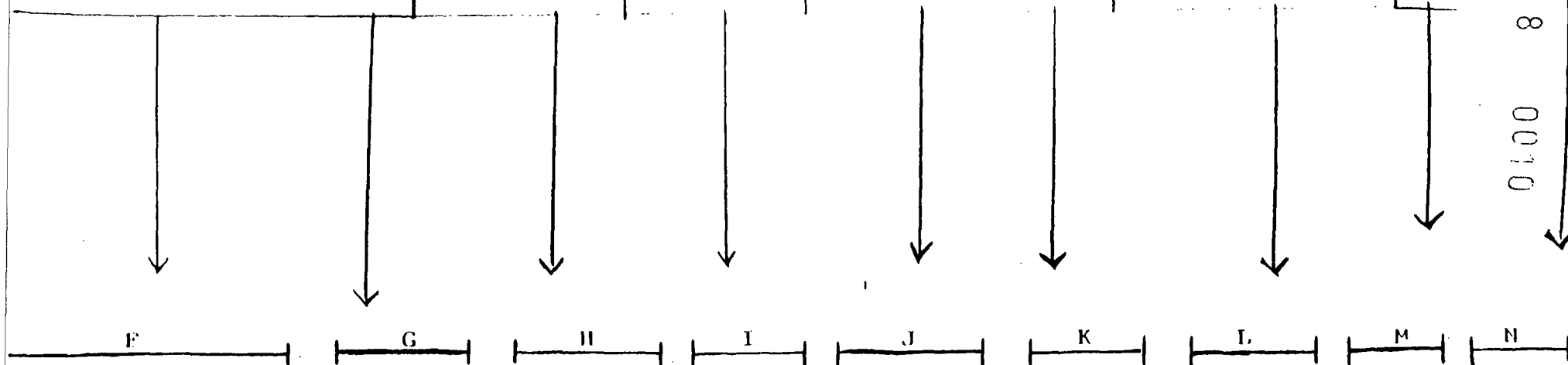
BLUFF ROAD  
Briefing(2)  
Press Rel.  
Fact Sheet

Public Consultation(3)  
Briefing  
Public Meeting

Briefing  
Public Consultation  
Press release  
Press Conf.

Briefing(2)  
Evaluation  
Interview  
Press release

280010



Bluff Road  
Cost Estimates

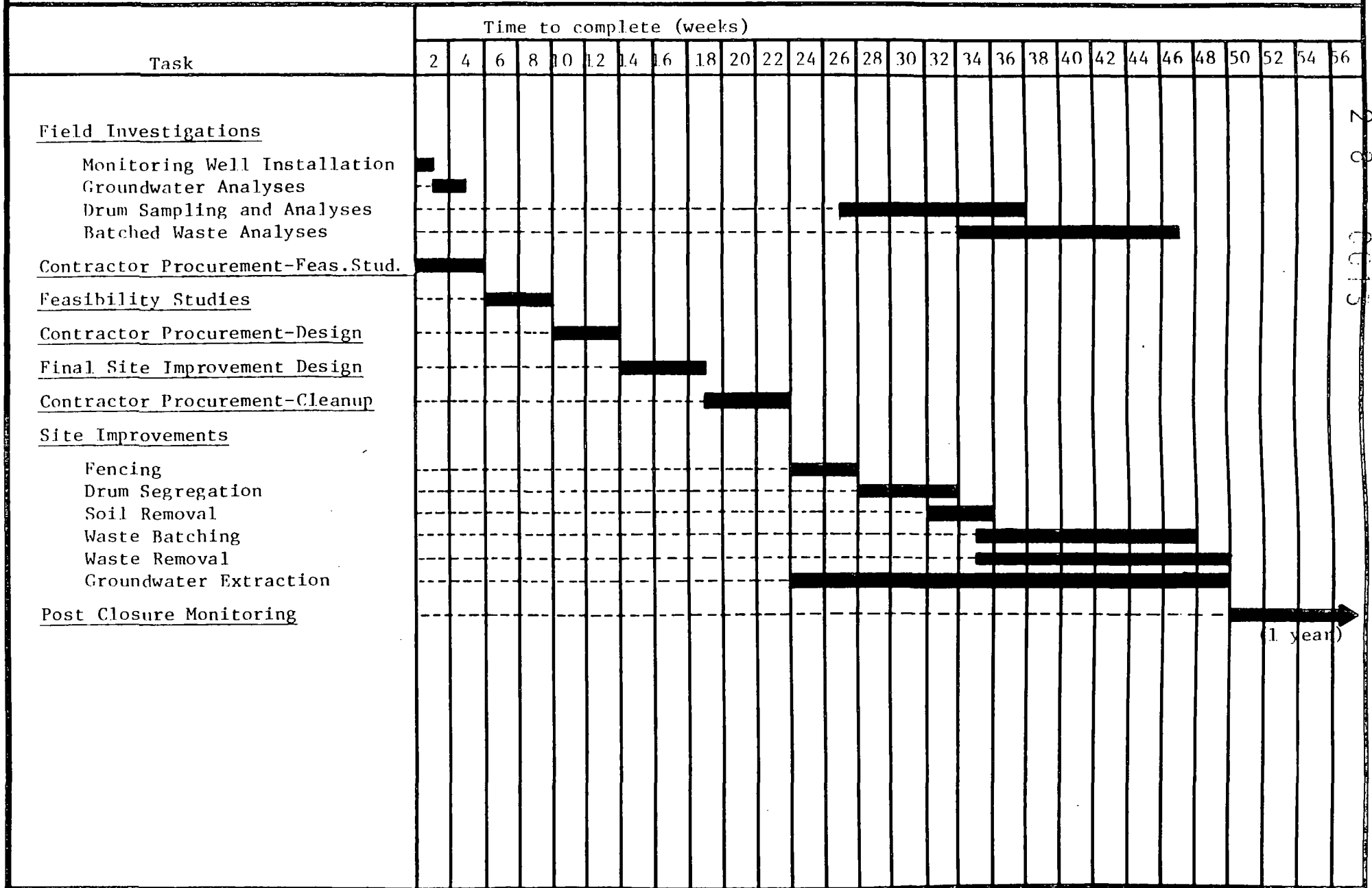
Briefings (9)	\$5,400
Community Information Interviews	2,800
Fact Sheets (2)	1,400
Press releases (4)	600
Public Consultations (9)	1,350
Public Meetings (2)	5,800
Press Conference (1)	350
Evaluation Interviews (1)	<u>2,200</u>
	\$19,900
 Travel 15 trips (a)\$150 per trip	 2,250
 Per diem & local transportation 30 days @ \$100	  3,000
	19,900
	2,250
	<u>3,000</u>
	25,150 + 10% contingency
	<u>2,500</u>
	<u>\$27,650</u>

ATTACHMENT #3  
BLUFF ROAD REMEDIAL APPROACH  
ESTIMATED COSTS

ELEMENT	EXPLANATION	COST (See Attachment)
A - F	Completed Management Phases	
G	Field Investigation a. Monitoring Well Installation b. Groundwater sampling and Analyses c. Drum Sampling and Analyses d. Batched Waste Characterizations	10,000 10,000 800,000 106,000
H	Feasibility Studies & Remedy Selection	30,000
K	Final Site Improvement Design	30,000
L	Site Improvements	1,100,000
N	Post-Closure Monitoring	<u>44,000</u>
TOTAL ESTIMATED COST		\$2,130,000

280012

ATTACHMENT 4  
BLUFF ROAD REMEDIAL APPROACH  
PROJECTED COMPLETION SCHEDULE



ATTACHMENT #5  
STANDARD COST ESTIMATING CRITERIA

Standard unit costs used for the development of RAP cost estimates are presented below. These costs were derived from a variety of sources based on the best information available at this time. However, due to the many assumptions and generalizations required, as well as a general lack of actual cost information, their accuracies may vary. Therefore, these costs should be considered an order of magnitude estimation at best, and are to be used for budgeting and long range planning purposes only.

1. Sampling: These estimates include sample collection, shipping and lab analyses only. If the sample is an unknown being analyzed for any possible contaminants; assume the unit cost for a complete analysis. This includes analysis of organics (113 priority pollutants) and inorganics (13 metals, cyanide, phenols). If contaminants are known and the sample will only be analyzed for a few specific parameters, the cost for a partial analysis should be used.

Unit Cost:

- |                      |               |
|----------------------|---------------|
| A. Complete analysis | \$1100/sample |
| B. Partial analysis  | \$ 500/sample |

Cost Computation:

Estimate of the number of samples x unit cost = total cost

Source: Ecology & Environment, Inc. based on information provided by EPA/SAD - Region IV and Meade Laboratories, Inc.

2. Geophysical Surveys: The cost of this work varies considerably depending on the site specific geology, techniques employed, level of confidence required and the size of the area to be surveyed. The ranges of costs shown below are for determining specific types of information regardless of the geophysical methods used to derive that information. The low figure represents an estimate to survey approximately 10 acres and the high figure represents 100 acres. These estimates assume the site is easily accessible and that no extraordinary safety precautions will be necessary.

Unit Cost:

- |   |                   |
|---|-------------------|
| A. Locate drum burial sites   | \$10,000 - 30,000 |
| B. Map leachate plumes  | \$10,000 - 30,000 |
| C. Determine depth to bedrock   | \$ 4,000 - 8,000  |
| D. Analysis of fracture trends (first order)                                    | \$ 5,000 - 7,000  |
| E. Detailed analysis of fractures including ground truthing (shallow rock only) | \$ 6,000 - 40,000 |

Cost Computation:

Summation of unit cost estimates + 5,000 (mobilization)

Source: Ecology and Environment, Inc. based on information from Teehnos, Inc.

3. Environmental Assessment: Costs vary depending on the complexity of the environmental setting, size of the site and the field work required to develop the report.

Unit Cost: \$30,000 - 70,000 each

Source: Ecology and Environment, Inc.

4. Engineering Design: Estimated costs of engineering designs are usually determined as a percentage of construction costs. Therefore, the cost of real construction required at the site should be estimated first. Surveys, well construction, reports, etc. should not be included in this estimate. The normal unit cost can be used for most work including hydrologic control structures, surface sealing and excavations. Complex unit costs are only applicable to gas barriers and collection systems, treatment systems, incinerators, etc.

Unit Cost:

	Estimated total less than \$1M	construction cost \$3M - 4M
Normal	6.3%	5.4%
Complex	7.6%	6.5%

Cost Computation:

Real construction cost x % from table ÷ 100 = design cost

Source: Farmers Home Administration

5. Site Security: First, determine if a secure fence with controlled access is necessary, or only warning signs. Then, estimate the perimeter in feet to be secured. The cost for fencing includes surveying, materials, installation and warning signs based on an 8 foot high chain link fence with three strand barbed wire on top and double gates. The cost for signs only includes complete installation of signs on posts at 50 foot intervals. Both costs assume the contractor will not be responsible for extraordinary safety procedures.

Unit Cost:

Complete fence	\$9.25/LF
Warning signs only	\$ .36/LF

Computation:

site perimeter in feet x unit cost = total cost

Source: Ecology and Environment, Inc. based on information provided by three Atlanta area fence and sign contractors.

6. Excavation of Buried Drums: Costs for this work is highly variable, and therefore all known factors should be considered before selecting a unit cost. These may include, but not be limited to: number of burial trenches; soil type and compaction; length of time buried; corrosiveness, reactivity and compatability of wastes; location or organization of drums in trench; water table elevation; depth of trench(es), etc. The lower unit cost represents a site

containing compatible, moderately hazardous materials where only 10% of the buried drums required recontainerization. After the amount of buried waste is estimated, an appropriate unit cost may be selected depending on the anticipated degree of complexity. If only the trench dimensions are known, assume 1 drum for every 40 cubic feet. These costs include only excavation, drum removal from trench and recontainerization. Transportation and disposal of drummed wastes is not included.

Unit Cost: \$170 - 250 (or more) per drum

Computation:

Estimated no. of drums (or volume in  $\text{ft.}^3 \div 40$ ) x unit cost = total cost

Source: Ecology and Environment, Inc. based on actual work performed in New England by Marlyn Engineers and Jet Line Services.

7. Recontainerization and Handling: Leaking or unsound drums are generally either placed into an overpack container, or the waste is transferred into a reconditioned (or new) drum of the same size. Costs for both methods are roughly equivalent. The cost given below includes all handling costs of the drum on site.

Unit Cost: \$135 per drum

Computation:

Estimated no. of leaking drums x 135 = total cost

Source: Ecology and Environment, Inc. (Region I)

8. Transportation of Wastes: The location of an assumed disposal facility, and the number of loads required must be estimated before these costs can be computed. An additional \$400 is added per load to cover loading the trucks and general and administrative expenses. These prices are for standard hazardous materials; radioactive, explosive or extremely hazardous substances may cost more.

Waste Type	Truck Type	Quantity per load
55-gal. drums	40' van trailer	80 drums
Bulk liquid	Stainless steel code tank truck	5,000 gallons
Crushed empty drums	30 $\text{yd}^3$ field dump truck	30 drums
Solid wastes	30 $\text{yd}^3$ field dump truck	20 tons (or 20 $\text{yd}^3$ )

Unit Cost: \$3.75 per loaded mile

Computation:

Estimated no. of loads x (one-way mileage x 3.75  $\div$  400) = total cost

Source: Cecos International, Inc.

9. Waste Disposal by Incineration: Many types of hazardous waste can be

incinerated. However, most incinerators are not approved for PCB's. Some incinerators cannot handle pesticides, herbicides, very acidic mixtures, heavy metals, explosive, or radioactive substances. Incineration costs generally include a heating value charge (HVC) based on the heating value of the waste in BTU per pound. Halogenated compounds and acidic substances will be assessed on additional acidity neutralization charge. The relative heating value of the materials should be estimated and then an appropriate unit cost selected. The higher cost might represent water and the lower cost pure solvents. This cost does not include chemical analyses of the waste required by the incinerator operator.

Unit Cost: \$.018 - .072 per pound

Computation:

HW quantity (gal.) x 8.4 lbs/gal. x HVC/lb. = total cost  
for acidic solutions multiply by 1.25

Source: Metropolitan Sewer District of Greater Cincinnati

10. Land Disposal: Consideration must be made for restrictions on certain substances at particular landfills. The total quantity of waste in tons (or drums) should be estimated for each category of waste (sludges, hazardous, non-hazardous etc.). The table below indicates the cost for disposal of each waste type.

Unit Cost:

<u>Waste type</u>	<u>Unit Cost</u>
Very hazardous materials	\$240 per ton
Flammable wastes	120 per ton
Industrial sludges	\$85 per ton
Drummed wastes	30 per drum

Source: Cecos International, Inc.

11. Surface Sealing: The design and implementation of a cost-effective capping strategy involves many site-specific considerations. The function of the cover (gas migration, erosion control etc.) and the local availability and cost of cover materials are primary considerations. If site-specific information is available, refer to page 3-1 of the Manual for Remedial Actions at Waste Disposal Sites to estimate the cost. Otherwise, the total area of the cap should be estimated and then a unit cost can be selected. The lower unit cost given below is for an 18 inch topsoil cover only, while the higher cost is for a Hypalon surface liner covered with 12 inches of sand and 8 inches of topsoil. These estimates include the cost of hauling, spreading and compacting the fill material assuming that a borrow site can be found within 20 miles of the disposal site. Re-vegetation is not included in these costs.

Unit Cost: \$30,000 - 70,000 per acre

Source: JRB Associates, Inc., Manual for Remedial Actions at Waste Disposal Sites, 1980 (draft final report).

12. Construction of Monitoring Wells: Unit costs for well drilling is highly variable depending on such factors as geographical location, geology, drilling technique, purpose of the well and the materials used for the casing, screen and annulus seal. First, the number of wells required and the approximate depth of each should be estimated. Obviously, the depth depends on where the contamination is expected to occur. The unit cost given below includes all associated costs for well installation assuming all stainless steel construction, mud rotary drilling technique and a 4 inch diameter well less than 100 feet deep in unconsolidated formations.

Unit Cost: \$70 per foot drilled

Computation:

(Estimated # wells x well depth x \$70) + \$1000 (set up) = total cost

Source: Ecology and Environment, Inc.

All other cost estimates presented in this RAP, unless otherwise specified, were developed using the criteria contained in the Manual for Remedial Actions at Waste Disposal Sites.

ATTACHMENT 6  
Bluff Road Site Remedial Approach  
Response to 14-Questionnaire

1. Information provided to Headquarters - The following tracking forms have been submitted: Preliminary Assessment, Site Inspection, Testative Disposition  
This site was referred to the Enforcement Division for their consideration. Enforcement then referred the case to HQ and case has been filed.  
Persons at HQ having knowledge of this site and case history are -  
Quentin Pair, DOJ  
Fred Stiehl, Atty, Task Force  
Lamar Miller, HO Task Force
2. EPA has the lead on this case. S.C. contacts are Hartsill Truesdale and Earl Williams 803/758-5681
3. Site History -  
An acetylene manufacturing plant was originally constructed at this site and two lagoons were constructed at the northeastern end of the facility. Over the years the lagoon at the northern corner of the facility was filled with lime (a by-product). Operated by South Carolina Recycling and Disposal, Inc, the Bluff Road site is used for the storage, recycling, and disposal of chemical wastes since 1974. An estimated 5,000 to 10,000 drums (many of which are leaking) containing hazardous chemicals are being stored on the site. The drums are in close proximity to each other, stacked in a "wall to wall" fashion on a site which encompasses about four acres. Substances stored on the site include waste lube oil, cutting oils, animal oils, wire drawing lube, 1,1,1, Trichloroethane, Trichloroethylene, chloroform, carbon tet, freons, various fluorocarbons, various acids, phenols, various pesticides, dyes/ink, laboratory reagents (see attachments).  
  
On October 26, 1977 heavy rainfall caused a chemical reaction with wastes stored in rusty drums at Bluff Road which resulted in the formation of a toxic cloud and the hospitalization of fifty people. On July 24, 1979, chemical wastes improperly stored in the warehouse caused a fire. Unknown substances in glass containers are located throughout the site.  
  
Leaking waste drums and groundwater contamination may threaten health because of the existence of two wells in the vicinity of the storage site, one of which is used as a drinking water source for the adjacent auto repair garage. The top-soil at Bluff Road is sandy, therefore quite permeable and the shallow aquifer occurs about 3 to 4 feet below the surface.
4. Detailed studies performed on site -  
Surveillance and Analysis Division Lab Region IV has developed a report titled Groundwater and Surface Water Investigation July 1, 1980, investigated by Hugh Vick and Terry Smoak.  
S.C. DHEC has also developed groundwater data on the Bluff Road site.

Ecology and Environment, Inc, under EPA contract, is currently developing an EAP (Emergency Action Plan) for the site.

5. Emergency/remedial measures necessary to site cleanup -  
Generally speaking emergency/remedial measures needed at this site would include but not be limited to the following:
  - A. Development and feasibility studies needed. (E&E FIT contractors currently working on this aspect.)
  - B. Actual removal and segregation of wastes including redrumming of leaking wastes.
  - C. Disposal of material in an approved site.
  - D. General post-closure methods to be employed.
6. Alternative methods -  
FIT contractors currently developing this aspect.
7. Final cleanup plan  
Under development by FIT
8. Mechanisms for funding closure plans of primary consideration in this case is the fact that 5-10% of the wastes at this site is EPA's specifically Research Triangle Park, Raleigh, N.C. The preceeding fact complicates any type of legal enforcement action and would make this site a good candidate for Superfund.
9. Actions planned for site -  
Our FIT contractors are developing an EAP (Emergency Action Plan) for Bluff Road; this project has an anticipated date of completion by February 16, 1981. The EAP will include feasibility studies as well as a comprehensive plan for remedial actions at Bluff Road.
10. Problems which may prevent implementation of activities under question #9 -
  - A. Lack of necessary funds at present time.
  - B. Possible problem of obtaining adjacent suitable land for use as a staging area. (site itself not large enough to segregate wastes)
11. Currently no cleanup actions are being conducted at the site.
12. Cost estimates -  
  
In a letter dated June 10, 1980 to Hartsill Turesdale, S.C. DHEC from Carol Miller LSB, a generalized cost estimate was submitted as:
  - A. Removal, transportation and disposal of 7,000 drums (including inventory, segregation, redrumming and analysis) at \$60.00 per drum . . . . . \$420,000

- B. Removal, transportation and disposal of top foot of earth from 2 acres, or 3222 2/3 cubic yards at \$60.00 per cubic yard  
\$193,600
- C. Border soil work on 2 acres at \$500.00 per acre. . . . \$ 1,000
- D. Installation of four shallow monitoring wells at \$500.00 per well and monitoring program for three years to include quarterly sampling of four installed wells and four Westinghouse wells at \$1000.00 per sample . . . . . \$ 98,000
- TOTAL . . . \$172,600

Again, our FIT contractor is also preparing a complete cost analysis of remedial action at the site. This is being prepared under the previously mentioned EAP (Emergency Action Plan).

13. Refer to 12 above.

4. Circumstances relevant to cleanup:

- A. Responsible parties-  
owners - Oscar Seidenberg  
1                      Mr. Hutchinson  
operator - SCR D and COCC
- B. Financial Capability-  
SCR D - very limited finances  
COCC - potentially capable of contributing significantly to cleanup .  
Owners - individuals, not likely contributors  
Other generators - potential significant contributors, many are large corporations.
- C. Demand letter -  
SCR D have maintained financial inability to cleanup site  
COCC has as yet an undetermined degree of liability  
Generators being contacted now  
EPA has committed itself to financing a portion, as yet undetermined, of the cleanup.
- D. Enforcement Activity  
Federal case filed - progressing  
State case filed - progressing  
Federal case - in discovery, attempting to establish COCC liability and to contact generators. Projecting about two months to complete investigation of generators.

State Case - status is "cloudy", possibility of State getting involved in Federal case at some point.

E. Superfund would probably expedite cleanup of Bluff Road.

EPA could not recover all costs since some wastes were generated by now defunct corporations and costs of cleanup will have to be covered by all generators.

Seeking reimbursement under Superfund may dilute arguments that generators are jointly and severally liable (by seeking percentage of cost of cleanup from each generator) but no more in this case than in any other.

EPA is pursuing generators; Superfund action would proceed contemporaneously with enforcement action.

Grass Roots Organizing Workshop (GROW) is involved in monitoring activities of SCRD. The County filed a suit to enjoin delivery of hazardous wastes into Richland County. The resulting settlement, however was violated. The County sought a contempt citation and the judge ordered a permanent injunction to prevent wastes from going to Bluff Rd.

The State will seek appropriations from the legislature, if Superfund is used, for its ten percent share of costs. The State is interested in Superfund being implemented at site despite its pending enforcement action. Appropriate persons in the SCDHEC to contact regarding Superfund would be those designated by Hartsill Truesdale Director of Solid Waste Division, SCDHEC, 2600 Bull Street, Columbia, S.C. 29201, 803/758-5681.